Remedial Action
Prefinal Inspection Report

Rose Chemicals Site

Holden, Missouri

prepared for:

Rose Chemicals
Steering Committee

prepared by:

Clean Sites, Incorporated
Alexandria, Virginia

submitted to:

U.S. EPA Region VII
Kansas City, Kansas

February 15, 1995

ROSE CHEMICALS SITE
PREFINAL INSPECTION REPORT

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1.0 SITE BACKGROUND

The following discussion provides a history of activities at the Martha C. Rose Chemicals, Inc., (Rose Chemicals) Site and describes the Record of Decision, Administrative Orders (AO), and remedial design submittals that lead to implementation of the remedy construction.

1.1 Site History

The Rose Chemicals Site is located in the City of Holden, Johnson County, Missouri as shown in **Figure 1.1.** The Site is limited to the property owned by the City of Holden (upon which Rose Chemicals operated) and the contiguous areas to which polychlorinated biphenyls (PCBs) have been released as a result of Rose Chemicals' operations; including East Pin Oak Creek and an intermittent unnamed tributary to East Pin Oak Creek, which flows through the southwest corner of the site. The Site is located at 500 West McKissock Street, north of Missouri Highway 58. The 13-acre Site contained two major buildings, the Main Building and the South Warehouse, that have a combined floor area greater than 100,000 square feet.

In 1982, Rose Chemicals began operations as a PCB-processing facility. Rose Chemicals was authorized by USEPA to decontaminate mineral oil dielectric fluids containing PCBs at concentrations equal to or less than 10,000 milligrams per liter (mg/l), and to dismantle and decontaminate PCB transformers and capacitors for the purpose of recycling metals and disposal of nonrecyclable materials. During its period of operation, Rose Chemicals received approximately 23 million pounds of PCB materials. Rose Chemicals ceased operations at the Site in February 1986, abandoning approximately 14 million pounds of PCB materials. As a result of Rose Chemicals' operations, PCBs were released to the environment.

On October 29, 1987, USEPA issued an Administrative Order on Consent, Docket No. 87-F- 0007 to the RCSC (AO1). Pursuant to AO1, PCB solids and liquids were removed from the Site and disposed in a Toxic Substances Control Act (TSCA)-permitted chemical waste landfill or treated at a TSCA-permitted incineration facility.

Following the removal activities, USEPA issued another Administrative Order in 1988 (AO2) to conduct a Remedial Investigation/Feasibility Study (RI/FS) at the Site. Under the terms of AO2, the RCSC conducted a remedial investigation (RI) and a feasibility study (FS).

The RCSC submitted the Report on the Remedial Investigation of the Rose Chemicals Site, Holden, Missouri by Burns and McDonnell Engineering Company to USEPA in February 1990. The RI identified PCBs in surface and subsurface soils, pond sediments, the sediments of East Pin Oak Creek and an unnamed tributary to East Pin Oak Creek,

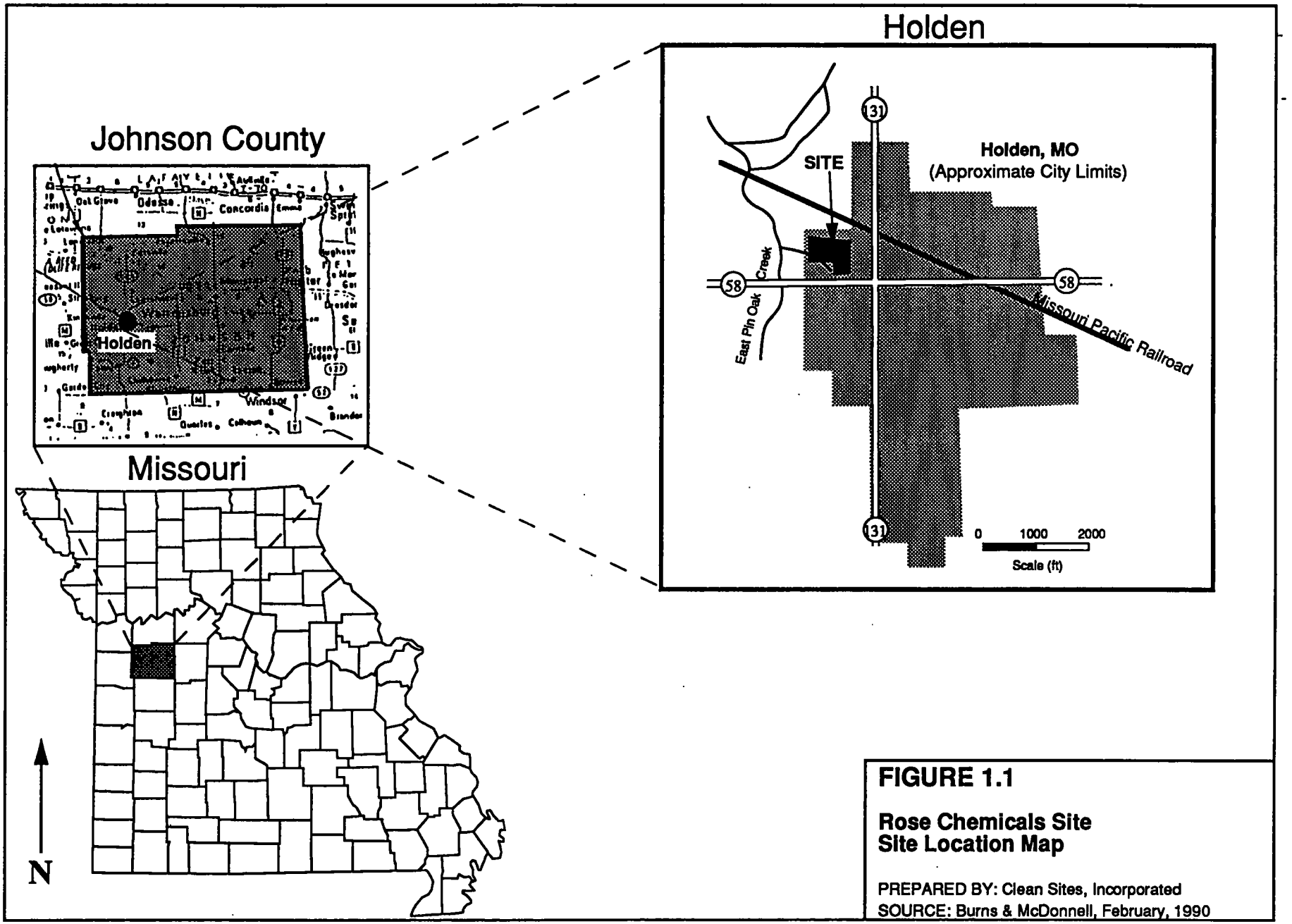


FIGURE 1.1

Rose Chemicals Site
Site Location Map

PREPARED BY: Clean Sites, Incorporated
SOURCE: Burns & McDonnell, February, 1990

and in site buildings. The following information concerning site conditions was concluded from the RI:

- o Limited surface soils contain PCBs at concentration greater than 500 mg/kg.
- o Subsurface soils contain PCBs at concentrations up to 700 mg/kg.
- o Sediments in East Pin Oak Creek and the unnamed tributary contain PCBs at concentrations up to 293 mg/kg.
- o Buildings, including concrete floor slabs, contain PCBs at concentrations up to 670,000 mg/kg.

The Feasibility Study for the Rose Chemicals Site, Holden, Missouri, by Burns and McDonnell Engineering Company, was submitted by the RCSC to USEPA in September 1990. The FS evaluated six remedial alternatives and screened out all but the following two alternatives:

Alternative 4 - removal and disposal of the PCB-containing sediments, removal and disposal of the Site buildings, and capping of the Site; and

Alternative 6 - removal and disposal of the PCB-containing sediments, removal and disposal of PCB-containing soils greater than 10 mg/kg PCBs, removal and disposal of the Site buildings and concrete floor slabs, and backfilling excavated areas of the Site with clean soil.

1.2 Record of Decision

The USEPA decision on the Remedial Action (RA) to be implemented at the Site is embodied in the final Record of Decision (ROD) for the Martha C. Rose Chemicals, Inc., Site issued on March 6, 1992.

The ROD selected Alternative 6 from the FS and included a modification to prevent withdrawal of shallow groundwater. The major components of the remedy chosen by USEPA and detailed in the ROD are:

1) removal and offsite disposal of sediments containing PCBs above 0.18 mg/kg from the East Pin Oak Creek and the unnamed tributary;

2) removal and offsite disposal or treatment and disposal of surface and

subsurface soil containing PCBs above 10 mg/kg;

3) dismantling of the Main Building and South Warehouse, including floor slabs and insulation, and offsite disposal or treatment and disposal of the debris;

4) backfilling all excavated areas with clean soil and regrading;

5) monitoring of ground water for a minimum 10-year period;

6) prohibiting by deed restriction the use of ground water at the site for purposes other than ground water contamination monitoring; and

7) treatment of soils, sediments, and other debris containing elevated levels of PCBs either on site or offsite prior to disposal.

1.3 Administrative Order

On September 4, 1992, Region VII of the U.S. Environmental Protection Agency (USEPA) issued an Administrative Order for Remedial Design and Remedial Action, Docket No. VII- 92-F-0026 (AO3), for the Martha C. Rose Chemicals, Inc., Site in Holden, Missouri. The Order was issued pursuant to Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Section 9606(a). The Order directs the Respondents, the Rose Chemicals Steering Committee (RCSC), and others to perform the Remedial Design (RD) for the remedy described in the Record of Decision issued on March 6, 1992 and to implement the remedial design by performing a Remedial Action (RA).

On November 30, 1992, USEPA issued a Modification to the Order. The Modification, effective December 17, 1992, amends the language of the earlier Order concerning RD/RA document deliveries and implementation requirements.

1.4 Remedial Design Documents

Consistent with the instruction of AO3, the RCSC initiated the remedial design. They retained Clean Sites, Inc. to develop the remedial design documents which comprised various plans, specifications, and drawings. The first submittals under the RD phase of the project were the Remedial Design Work Plan and the Remedial Design Site Health and Safety Plan. These documents were completed by Clean Sites on behalf of the RCSC and submitted to USEPA on January 17, 1993. Attached to the RD Work Plan were; 1) a sampling and analysis plan for the collection of concrete cores, and 2) a Remedial Design Quality Assurance Project Plan. The RD Work Plan described data

collection efforts to be undertaken and the content of each subsequent RD submittal (60 percent, 95 percent, 100 percent).

The RCSC submitted the first of these submittals, the Preliminary Remedial Design Document by Clean Sites, to USEPA on June 1, 1993. The Preliminary RD included results from RD concrete sampling, design plans, specifications, a construction schedule, and quality assurance project plan objectives. The concrete sampling was designed to more clearly define those areas of concrete slabs containing PCBs above the USEPA action level for treatment.

The Preliminary RD was approved and comments were received from USEPA on June 22, 1993 and from the Missouri Department of Natural Resources (MDNR) on July 13, 1993. Their comments were incorporated into the Prefinal RD. The RCSC submitted the Prefinal Remedial Design Document by Clean Sites to USEPA on August 23, 1993. The Prefinal RD included, in addition to the Preliminary RD, more detail in the plans and specification sections, a contingency plan, an operations and maintenance plan, a cost estimate, and drawings.

The Prefinal RD was approved and comments were received from USEPA on September 20, 1993. Their comments were incorporated into the Final RD. The RCSC submitted the Final Remedial Design Document by Clean Sites to USEPA on October 20, 1993. The Final RD included the same plans, specifications, and drawings as the Prefinal RD with only minor changes, and included a Preliminary Remedial Action Field Sampling and Analysis Plan.

Approval of the Final RD was received from USEPA on November 18, 1993. There were two comments to the Final RD Document; these were addressed and forwarded to USEPA on December 9, 1993.

1.5 Remedial Action Documents

On behalf of the RCSC, Clean Sites retained U.S. Pollution Control, Incorporated (USPCI) to perform the construction at the Rose Chemicals Site. Notification of contractor selection was forwarded to USEPA on February 3, 1994. The RCSC submitted a draft Remedial Action Work Plan by USPCI to USEPA on March 28, 1994. The RA Work Plan described the contractor's approach for implementing the construction and included a RA Health and Safety Plan, Erosion and Sedimentation Control Plan, Construction Quality Control Plan, and a Site-Specific Emergency Contingency Plan.

Comments to the draft RA Work Plan were received from USEPA around April 8, 1994. Their comments were incorporated into the Final RA Work Plan by USPCI which was

submitted on behalf of the RCSC to USEPA on May 4, 1994. The final submittal included the Final Remedial Action Field Sampling and Analysis Plan by Clean Sites. USPCI mobilized to the Site on May 2, 1994.

2.0 CONSTRUCTION ACTIVITIES

A Prefinal Inspection was held at the Rose Chemicals Site on February 1, 1995. The inspection was attended by representatives from USEPA, RCSC, Clean Sites (the project coordinator), USPCI (the prime construction contractor), and Burns & McDonnell Waste Consultants (B&MWCI, the Independent Quality Assurance Team). USEPA and Clean Sites reviewed each construction and support activity that was included in an inspection checklist. After discussing each item, a consensus was reached as to the status of each construction item after completing the checklist. The checklist is contained in Appendix A.

The following discussion describes the major construction activities completed during the Remedial Action at the Rose Chemicals Site and those activities that have yet to be finished prior to requesting certification of completion of the Remedial Action, as discussed during the Prefinal Inspection.

2.1 Activities Completed

Section 6, specifications, of the Final Remedial Design Document was used to develop the Prefinal Inspection checklist. The checklist was divided into two categories; construction activities and support activities. The construction activities coincided with specification section numbers of major activities (e.g., Section 02060, Building Demolition). Support activities, on the other hand, are tasks that were employed to assist with completion of the remedy and also coincided with specification section numbers (e.g., Section 13140, Staging Facilities). There are 18 activities included in the checklist. Those activities that are completed are discussed further in this section. **Figure 2.1** shows the Site prior to construction.

Building Demolition

The superstructures of the Main Building, South Warehouse, and the Shed have been demolished and removed from the Site. Building demolition included removal of sheet metal, structural steel ("I" beams), pipes, insulation, wood, concrete blocks, a crane, buried sewer lines and pipes, and other ancillary material. Insulation was removed separately and treated at a TSCA/RCRA incinerator. The remaining material was disposed at a TSCA landfill.

Concrete Demolition

Concrete in the Main Building, South Warehouse, and the Shed have been demolished and removed from the Site. Concrete demolition included slabs, footers, subbase material, and gravel and concrete fill. Most of the material was located within the building but an additional concrete footer was encountered west of the South

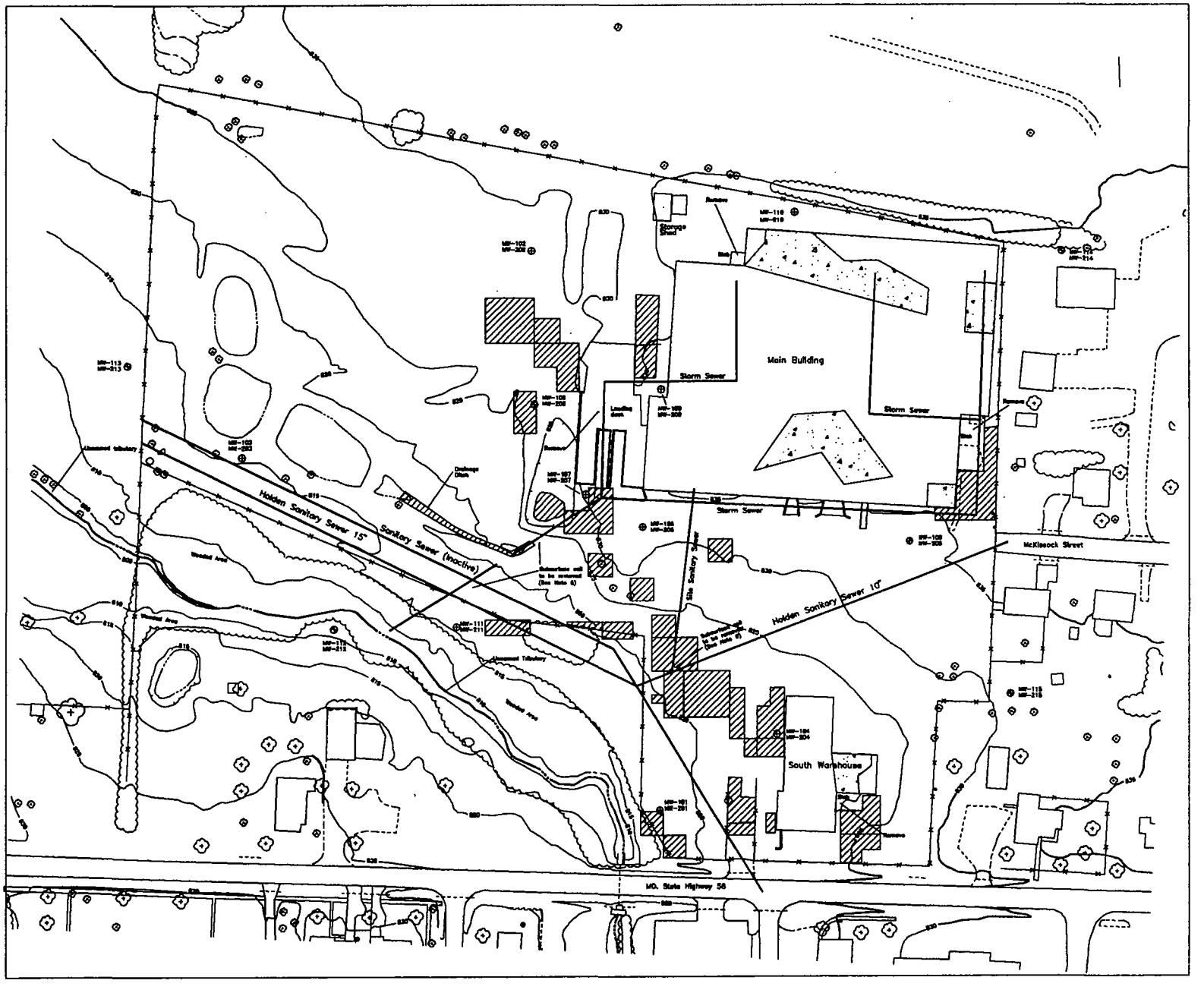


Figure 2.1
Site Map

ROSE CHEMICALS SITE

COMPILED BY: WESTERN AIR MAPS

DRAWN BY: CLEAN SITES, INC.

SCALE: 1" = 60' FILENAME: RHROSE21.DWG

DATE OF PHOTOGRAPHY - MARCH 9, 1993

Warehouse. Concrete was either disposed at a TCSA landfill or a treated at a TSCA/RCRA incinerator. A small quantity of concrete was disposed at a RCRA Subtitle D Special Waste landfill.

Soil Excavation

Soil above the USEPA performance standards was excavated and removed from the Site. Soils were excavated beneath the Main Building, South Warehouse, and Shed. Soils were also excavated from soil composite areas outside the buildings and buried pipes. Soils were either disposed at a TSCA landfill or treated at a TSCA/RCRA incinerator.

Sediment Removal and Backfilling

Sediment above the USEPA performance standard in East Pin Oak Creek and the unnamed tributary to East Pin Oak Creek were excavated and removed from the Site. Sediment was removed to bedrock or 4 feet depth in each waterway. Sediment was disposed in a TSCA landfill. Excavated sediment was backfilled with clean sand and gravel.

Waste Disposal

Waste material above USEPA performance standards and other waste streams were disposed offsite. These wastes included building debris, concrete, subbase material, soil, sediment, stone, wastewater sludge, spent granular activated carbon, buried trash, buried pipes, and other miscellaneous waste. Approximately 2,400 truck loads were shipped offsite.

Monitoring Wells

Four deep and four shallow monitoring wells (a total of 8 wells) were installed adjacent to the Site. Twenty QED Well Wizard sampling systems were installed in 23 of the long-term monitoring wells. The remaining sampling systems will be installed in the Spring.

Erosion Control

Erosion control measures have been installed both onsite and offsite. Silt fencing has been erected along East Pin Oak Creek and its unnamed tributary, and in some locations onsite.

Site Clearing

Trees and brush were removed along East Pin Oak Creek and its unnamed tributary. Trees were chipped and spread onsite.

Wastewater Treatment

Wastewater generated during the construction was treated by the wastewater treatment system and irrigated onsite. One sample was collected from the effluent after approximately 20,000 gallons of wastewater was treated. Approximately 800,000 gallons of wastewater was treated.

Staging Areas

Changes in sampling protocol and sequencing of events were implemented to expedite the construction schedule and limit the amount of waste handling. Consequently, staging areas were built in two areas; in the Main Building and near the personnel decontamination trailer. Staging areas were only used when needed.

Transload Facilities

Two transload facilities (one in Lee's Summit, the other in Kansas City) were utilized during the project. Both facilities are owned by Union Pacific, the parent company of USPCI. Most waste was transported to the Lee's Summit facility. No waste containers (gondola cars or intermodal boxes) remain at either location.

Surveying

Surveying was completed to assist with sample and well locations and backfilling. Surveying was conducted to show stream backfill elevation, establish the grid sampling system, and to establish well coordinates and elevations.

Fill Materials

Fill materials were tested prior to bringing material onsite. Sand, gravel, soil, and topsoil were analyzed for PCBs, all of which passed the performance standard. Geotechnical testing was performed on sand, gravel, and soil and topsoil. Organic matter testing was performed on topsoil.

Quality Control

Various quality assurance/quality control documentation were generated during the course of the project. USPCI completed quality control reports. B&MWCI generated quality assurance reports. PSARA (the sampling contractor) generated backup for PEPVP concurrence packages and validated analytical data. Clean Sites maintained daily construction logs.

2.2 Activities Outstanding

Those activities that must be completed to finish the Remedial Action construction are detailed in this section. A schedule for completion of these activities is contained in Section 3.1.

Monitoring Wells

Monitoring well 207, a shallow well, was damaged during the construction. A storm sewer pipe was located directly adjacent to the well. This well will be replaced with another shallow well in close proximity to the original location. QED Well Wizard sampling systems will be installed in the new well and two other wells (in the long-term monitoring network) that are missing the sampling system.

Backfill

Cut and fill activities have been completed to roughly grade the Site. Soil and topsoil will be brought onsite from the offsite borrow sources. A minimum of 10 inches of clean fill will be placed and compacted over the eastern portion of the Site.

Chain Link Fence

The chain link fence will be completed prior to mobilization for the remaining construction activities. The southwestern fence line was moved north of and adjacent to the unnamed tributary.

Final Grading

After backfilling is complete, the site will be graded prior to placement of seed.

Seeding

Areas onsite that have been backfilled will be seeded. Areas adjacent to the creek and tributary that were impacted during the construction will also be seeded.

Surveying

Additional surveying may be performed to support documentation of backfill volumes and verify final elevations.

3.0 SCHEDULE

As discussed in Section 2.0, some construction activities are yet to be completed. The Prefinal Inspection is the first step in "closing out" the Site. Once all construction activities are completed, a certification of completion of the RA can be requested. This section discusses the schedule of remaining construction activities and presents a schedule for bringing the Site to closure via reports and certification.

3.1 Remaining Construction Activities

Figure 3.1 presents a schedule of the remaining construction activities. Items identified in Section 2.2 are included in the schedule. A mobilization date of March 20, 1995 is assumed. The Site would be backfilled, graded and seeded. Monitoring well 207 would be replaced and three QED sampling systems installed. Surveying would be completed prior to demobilization. Although the schedule shows a three week duration, the actual completion date will be contingent upon the amount of precipitation encountered during the period. Therefore, demobilization may occur later than predicted.

3.2 Remaining Reports

Figure 3.2 depicts a schedule of "closeout" activities for the Rose Chemicals Site. The Prefinal Inspection was completed on February 1, 1995. According to AO3, this Prefinal Inspection Report must be submitted within 30 days. In an effort to expedite the closeout reporting schedule, both the Prefinal and Final Inspection reports will be submitted within 15 days of the inspections. AO3 allows 60 days to submit the Draft Remedial Action Implementation Report (RAIR) after the Final Inspection. Once again, this schedule will be expedited and the Draft RAIR will be submitted 30 days after the Final Inspection (according to Figure 3.2). Certification for completion of the Remedial Action will be submitted concurrently with the Final Inspection Report. Assuming expedited submittals are not impacted by the final construction activities, the Final RAIR will be submitted on June 30, 1994.

Figure 3.1 - Rose Chemicals Site
Remaining Construction Activities

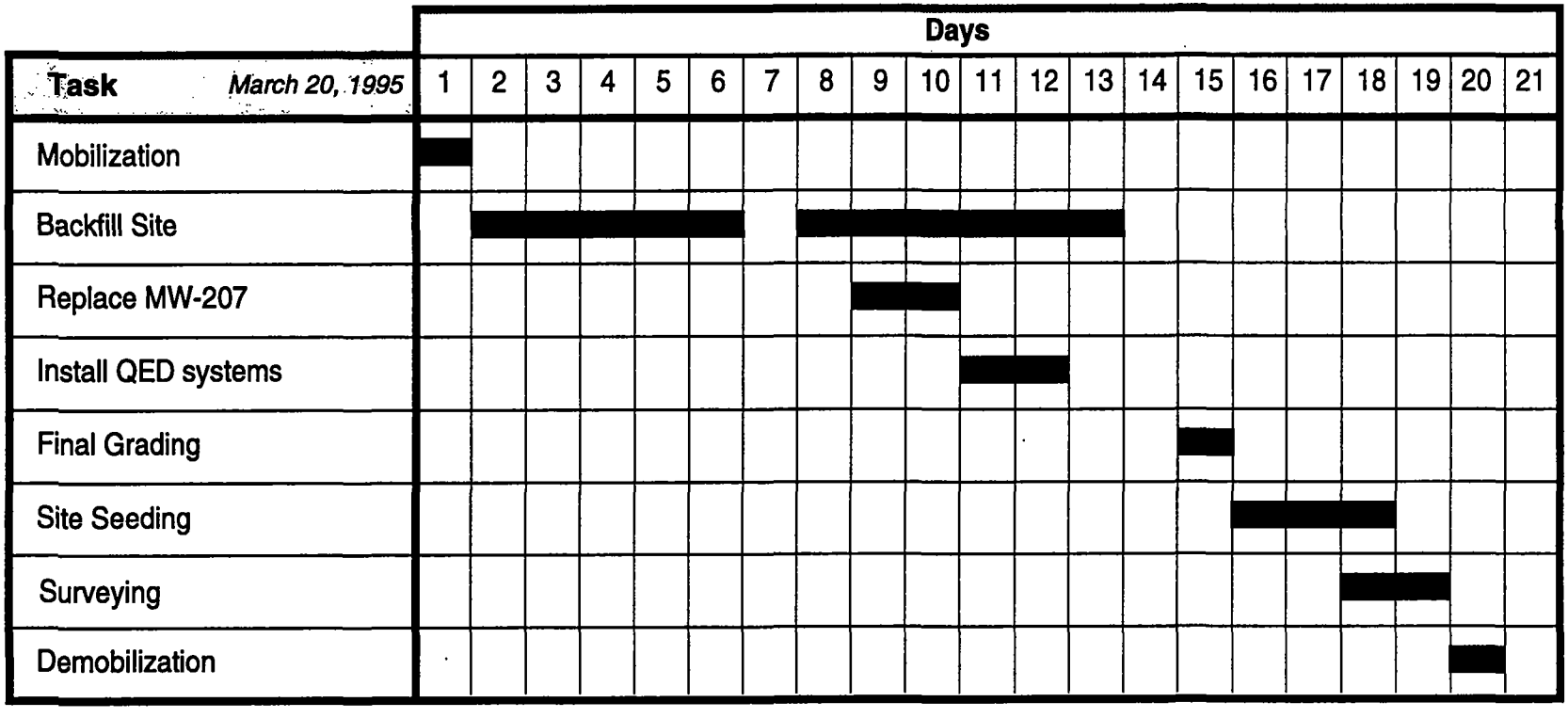
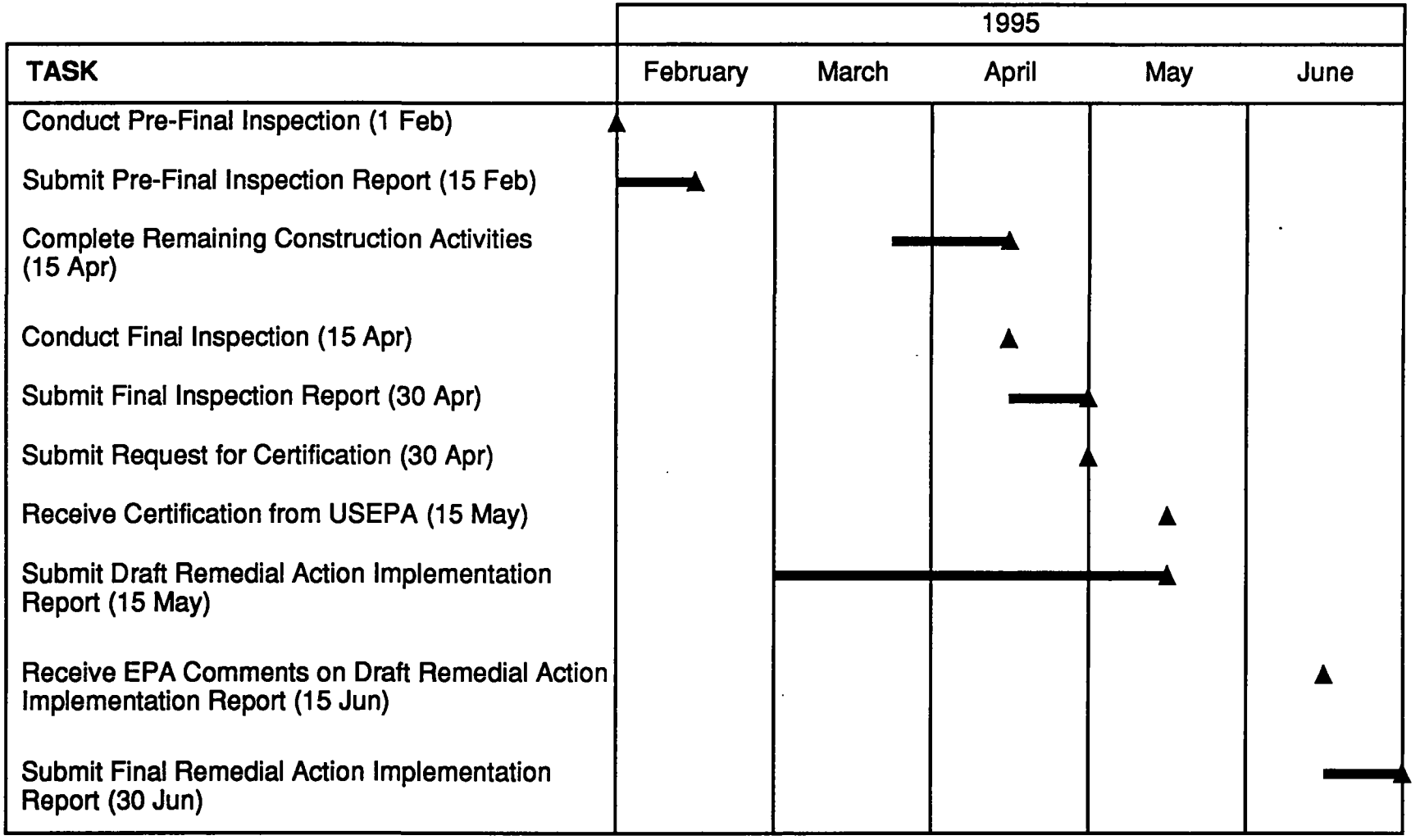


Figure 3.2
Rose Chemicals Site
Remaining Reports Schedule



APPENDIX A

PREFINAL INSPECTION CHECKLIST

ROSE CHEMICALS SITE REMEDIAL ACTION
PRE-FINAL INSPECTION CHECKLIST

CONSTRUCTION ACTIVITIES	APPROVED	REJECTED	APPROVED Conditionally (see remarks)	SPRING 95 Completion
1. Building Demolition				
A. Main Building	☒	☐	☐	☐
B. South Warehouse	☒	☐	☐	☐
C. Northwest Shed	☒	☐	☐	☐
2. Concrete Demolition				
A. Main Building	☒	☐	☐	☐
B. South Warehouse	☒	☐	☐	☐
C. Northwest Shed	☒	☐	☐	☐
3. Soil Excavation				
A. Main Building	☒	☐	☐	☐
B. South Warehouse	☒	☐	☐	☐
C. Soil Composite Areas, Trenches	☒	☐	☐	☐
4. Sediment Removal and Backfilling				
A. Un-named Tributary	☒	☐	☐	☐
B. East Pin Oak Creek	☒	☐	☐	☐
C. Dam installation and removal	☒	☐	☐	☐
5. Waste Disposal				
A. Manifests	☒	☐	☐	☐
B. Waste Water Results	☒	☐	☐	☐
6. Monitoring Wells				
A. Well installation	☒	☐	☐	☐
B. QED Systems	☐	☐	☒	☐
C. MW-207 abandonment	☒	☐	☐	☐
D. MW-207 replacement	☐	☐	☐	☒
7. Backfill				
A. Soil Areas and Buildings	☐	☐	☐	☒
B. Stream	☒	☐	☐	☐
C. Ponds	☐	☐	☐	☒
8. Erosion Control Measures				
A. Off-site	☒	☐	☐	☐
B. On-site	☒	☐	☐	☐
9. Chain Link Fence	☐	☐	☐	☒

CONSTRUCTION ACTIVITIES	APPROVED	REJECTED	APPROVED Conditionally (see remarks)	SPRING 95 Completion
10. Final Grading	☐	☐	☐	☒
11. Seeding				
A. On-site	☐	☐	☐	☒
B. Off-site	☐	☐	☐	☒
12. Site Clearing				
A. Along Un-named Tributary	☒	☐	☐	☐
B. Along East Pin Oak Creek	☒	☐	☐	☐
SUPPORT ACTIVITIES				
13. Wastewater Treatment				
A. Sample Results Log on file	☒	☐	☐	☐
B. Quantity of water treated	☒	☐	☐	☐
14. Staging Areas				
A. Main Building, Crane Bay	☒	☐	☐	☐
B. Main Building, Soil Excavation	☒	☐	☐	☐
15. Transload Facilities				
A. Lee's Summit	☒	☐	☐	☐
B. Kansas City	☒	☐	☐	☐
16. Surveying				
A. Stream Backfill	☒	☐	☐	☐
B. Sample Grid Layout	☒	☐	☐	☐
C. Monitoring Wells	☒	☐	☐	☐
D. Final and Intermediate Topos				
a. Initial Topo	☒	☐	☐	☐
b. Trench Topo	☒	☐	☐	☐
c. Rough Grade Topo	☒	☐	☐	☐
d. Final Grade Topo	☐	☐	☐	☒
17. Fill Materials				
A. Sand	☒	☐	☐	☐
B. Gravel	☒	☐	☐	☐
C. Soil	☒	☐	☐	☐
D. Topsoil	☒	☐	☐	☐
E. RipRap	☒	☐	☐	☐

CONSTRUCTION ACTIVITIES	APPROVED	REJECTED	APPROVED Conditionally (see remarks)	SPRING 95 Completion
18. Quality Control				
A. Contractor Daily and Weekly Quality Control Reports	☒	☐	☐	☐
B. IQAT Daily and Weekly Quality Assurance Reports	☒	☐	☐	☐
C. PSARA Sample Results, PEPVP concurrence packages	☒	☐	☐	☐

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